

158

QK
1
H25

**BOTANICAL MUSEUM
LEAFLETS
HARVARD UNIVERSITY**

U. of ILL. LIBRARY

FEB 10 1972

CHICAGO CIRCLE

PRINTED AND PUBLISHED AT THE
BOTANICAL MUSEUM
CAMBRIDGE, MASSACHUSETTS

BOTANICAL MUSEUM LEAFLETS
HARVARD UNIVERSITY

VOLUME XXII

BOTANICAL MUSEUM
CAMBRIDGE, MASSACHUSETTS
1967-1970

TABLE OF CONTENTS

NUMBER 1 (September 8, 1967)

Bat Cave Revisited

By PAUL C. MANGELSDORF, HERBERT W. DICK
AND JULIAN CAMARA-HERNANDEZ 1

NUMBER 2 (December 27, 1967)

Prehistoric Maize, Teosinte, and Tripsacum from Tamaulipas, Mexico

By PAUL C. MANGELSDORF, RICHARD S.
MACNEISH AND WALTON C. GALINAT 33

NUMBER 3 (November 22, 1968)

Catalogue of Infrared Spectra of Fossil Resins (Ambers) I—North and South America

By JEAN H. LANGENHEIM AND CURT W. BECK 65

NUMBER 4 (January 10, 1969)

De Plantis Toxicariis e Mundo Novo Tropicale Commentationes III. Phytochemical Exami- nation of Spruce's Original Collection of Banisteriopsis Caapi

By RICHARD EVANS SCHULTES, BO HOLMSTEDT
AND JAN-ERIK LINDGREN 121

De Plantis Toxicariis e Mundo Novo Tropicale Commentationes IV

By RICHARD EVANS SCHULTES 133

NUMBER 5 (June 13, 1969)

- Tree Datura Drugs of the Colombian Sibundoy
By MELVIN L. BRISTOL 165

NUMBER 6 (June 25, 1969)

- De Plantis Toxicariis e Mundo Novo Tropicale
Commentationes V. *Virola* as an orally ad-
ministered hallucinogen
By RICHARD EVANS SCHULTES 229

NUMBER 7 (November 21, 1969)

- A New Amazonian Arrow Poison: *Ocotea venenosa*
By A.J. KOSTERMANS, HOMER V. PINKLEY AND
WILLIAM L. STERN 241
- Blanche Ames Ames (1878-1969)—An Appreciation
By RICHARD EVANS SCHULTES 253
- Four New Species of *Saurauia* from South America
By DJAJA D. SOEJARTO 265

NUMBER 8 (December 26, 1969)

- Natural and Artificial Hybrid Generic Names of
Orchids. Supplement I: 1966-1969
By LESLIE A. GARAY AND HERMAN R. SWEET 273

NUMBER 9 (April 30, 1970)

- Teosinte Introgression in the Maize of the Nobo-
game Valley
By H. GARRISON WILKES 297
- Early Eight-Rowed Maize from the Middle Rio
Grande Valley, New Mexico
By WALTON C. GALINAT, THEODORE R.
REINHART AND THEODORE R. FRISBIE . . . 313

NUMBER 10 (June 29, 1970)

Ethnogynecological Notes in the Harvard University Herbaria

By SIRI VON REIS ALTSCHUL 333

De Plantis Toxicariis e Mundo Novo Tropicale
Commentationes VII. Several Ethnotoxicological Notes from the Colombian Amazon

By RICHARD EVANS SCHULTES 345

INDEX OF ILLUSTRATIONS

	PLATE
Ambelania Lopezii <i>Woods</i>	LXXX, LXXXI
Banisteriopsis Caapi (<i>Spruce ex Griseb.</i>) <i>Morton</i>	XXIX, XXXI-XXXIII
Blanche Ames Ames	LXVI
Blanche Ames Ames and Oakes Ames . . .	LXXIII
Calopogon pulchellus (<i>Salisb.</i>) <i>R.Br.</i>	LXIX
Chelonanthus alatus (<i>Aubl.</i>) <i>Pulle</i>	XL
Connarus opacus <i>Schellenb.</i>	XXXV
Connarus Schultesii <i>Standl.</i>	XXXVI
Cypripedium Calceolus <i>L.</i>	
var. pubescens (<i>Willd.</i>) <i>Correll</i>	LXXI
Datura candida (<i>Pers.</i>) <i>Saff.</i> cultivars	XLIX-LI, LIII, LV-LXI
Datura cultivars	LII
Datura sanguinea <i>R. & P.</i> cultivars	LIV
Davidia involucrata <i>Baill.</i> (Dove Tree) . . .	LXVII
Distictella racemosa (<i>Bur. et K. Schum.</i>) <i>Urb.</i>	LXXXII
Duroia hirsuta (<i>P. & E.</i>) <i>Schum.</i>	XLII

<i>Duroia petiolaris</i> <i>Hook.f.</i>	XLIV
<i>Duroia saccifera</i> (<i>Mart.</i>) <i>Benth. & Hook.f.</i> .	XLIII
<i>Epidendrum tampense</i> <i>Lindl.</i>	LXXII
Evidence of teosinte introgression and maize × teosinte hybridization	LXXVI
<i>Habenaria nivea</i> (<i>Nutt.</i>) <i>Spreng.</i>	LXX
Infrared spectra of amber	XIV-XXVIII
<i>Lisianthus nigrescens</i> <i>Cham. et Schlechtd.</i> . . .	XLI
Maize of the Nobogame Valley	LXXV
Map of maize-containing sites in New Mexico	LXXIX
Map of the area of the Colombian Amazon inhabited by Witoto Indians	LXII
Map of the Valley of Sibundoy, Colombia .	XLVIII
<i>Martinella obovata</i> (<i>HBK.</i>) <i>Bur. et K. Schum.</i> LXXXIII	
<i>Ocotea venenosa</i> <i>Kosterm. et Pinkley</i> . .	LXIV, LXV
<i>Polyradicion Lindenii</i> (<i>Lindl.</i>) <i>Garay</i> . . .	LXVIII
Prehistoric maize from Bat Cave	I-VII
Prehistoric maize from Tamaulipas	VIII-XI, XIII
Prehistoric teosinte from Tamaulipas	XII
Prehistoric <i>Tripsacum</i> from Tamaulipas . . .	XIII
<i>Psychotria involucrata</i> <i>Sw.</i>	XLVI

<i>Psychotria nudiceps Standl.</i>	XLV
<i>Psychotria psychotriaefolia (Seem.) Standl.</i> . .	XLVII
Richard Spruce	XXX
<i>Rourea glabra HBK.</i>	XXXVII
<i>Schoenobiblus peruvianus Standl.</i>	XXXVIII
<i>Stelis pendulispica Ames</i>	LXXIV
<i>Styrax Tessmannii Perk.</i>	XXXIX
Teosinte-pollinated maize ears	LXXVIII
Tripsacoid characters in maize cobs	LXXVII
<i>Unonopsis veneficiorum (Mart.) R.E. Fr.</i> .	XXXIV
<i>Virola theiodora (Spr. ex Bth.) Warburg</i> . .	LXIII

INDEX

TO GENERA AND SPECIES

AGATHIS, 79, 83, 89, 90
australis *L.*, 89

AGERATUM
conyzoides, 338

agua, 204

agua blanca, 191, 192

ACTINIDIACEAE, 265

ALLOPLECTUS
semicordatus *P. & E.*, 151

amaraguña, 148

amarón, 185, 209

amarón borrachera, 209

AMBELANIA
Lopezii Woods. ex R.E.
Schult., 347-349, 351

amber, 65-120

ANADENANTHERA
colubrina, 237
peregrina, 230, 237

andaquí, 185, 223

andaquí borrachera, 223, 224

ANNONACEAE, 134, 337

APHANA
sp., 337

APOCYNACEAE, 337, 347

ARACEAE, 345

ARAUCARIA, 78, 83

ARAUCARIACEAE, 78, 79, 82, 83, 89

ARAUCARIOXYLON, 83

ARAUCARIACITES
australis *Cook.*, 78

ARAUCARITES, 83
longifolia, 89

ARISTOLOCHIA
sp., 341

ARISTOLOCHIACEAE, 341

arrow poisons, 136, 144, 241-
251, 347, 351

ayahuasca, 121, 237

BANISTERIA, 122
Caapi Spruce ex Griseb., 122,
124
sp., 126, 127

BANISTERIOPSIS, 122, 158
Caapi (Spruce ex Griseb.)
Morton, 122, 123, 126, 128,
129, 164, 237
inebrians, 164, 237
Rusbyana, 164, 230, 237
spp., 191, 192, 195

beans, 182, 297

BESLERIA
ignea Fritsch., 151

be-zia, 148

biangán, 185, 208

biangán borrachera, 188, 190,
208, 209

biaxii, 195

BIGNONIACEAE, 337

blanco, 204

BORAGINACEAE, 336-338, 340

borracha, 202

borracho, 202

borrachera, 168, 184, 185, 187,
190, 193, 202, 204, 206

borrachera de agua, 202

borrachero, 206, 214

borracherushe, 202

BRACHYPHYLLUM-
PAGIOPHYLLUM, 79

BRUGMANSIA

arborea Lagerh., 201

aurea Lagerh., 201

bicolor Pers., 198

candida Pers., 201

sanguinea D. Don, 198

bui-ish borrachera, 204, 205, 208

bui-ish borracherushe, 205

BULBOSTYLIS

capillaris, 339

BUNCHOSIA, 124

burundanga, 191

buyés, 202, 204

buyés borrachera, 202, 204, 205

buyés borracherushe, 202

BYRSONEMA, 124

caá-pi, 127

caapi, 121, 122, 124, 126, 127,
237

caapi-pinima, 127

calientes, 190

CALOPOGON

pulchellus (Salisb.) R. Br., 259

CAMPANULACEAE, 341

CAMPELIA

zanonia, 338

CANAVALIA

sp., 341

cari, 185, 214

cari borrachero, 213

CENTROPOGON

calycinus, 341

CEPHALOTAXUS, 73

chaluá borrachero, 214

CHELONANTHUS, 151

alatus (Aubl.) Pulle, 146, 147

chelonoides (L.) Gilg., 148

chicha, 193, 347

chontaruco, 185, 208

chontaruco borrachera, 208

COMMELINACEAE, 338

COMPOSITAE, 336, 338, 339

CONNARACEAE, 136, 138

CONNARUS

lentiginosus Brandg., 140

opacus Schellenb., 136, 137

Schultesii Standl. ex Schult.,
138-140

Sprucei Baker, 137

CONOMORPHA

citrifolia Mez, 346

CREMASTUS

sceptrum, 337

CRYPTOCARYA

Bowiei (Hook.) Druce, 244,
246

cuauhchichic, 134

cucu, 185, 211

culebra, 185, 220

culebra borrachera, 185, 189–
191, 220, 222

cumala, 232

CUNNINGHAMITES, 83

CUPRESSACEAE, 79, 82

CUPRESSINOXYLON, 82
Bibbinsii, 82

curare, 136, 144, 351

CYPERUS

brevifolius, 341

CYPRIPEDIUM

Calceolus L.

var. *pubescens* (Willd.)

Correll, 261

CYRTANDRA

Cumingii, 337

sp., 337

DAMMARA, 83

australis Lamb., 89

microlepis Heer, 80

danta, 185, 208

danta borrachera, 190, 208

DATURA, 160, 168–170, 176–

181, 184, 187–193, 195–198,

205, 212, 213, 215, 218, 223

affinis Saff., 201

arborea R. & P., 201

aurea Lagerh., 201

c.v. 'Andres', 174, 179, 183,

186, 189, 198, 218, 222, 223

candida (Pers.) Saff., 170, 172,

173, 175, 176, 178, 180–182,

184, 190, 197, 200–203, 218,

222, 223

c.v. 'Amarón', 172–176, 178–
180, 183, 186, 188, 198, 209,
210

c.v. 'Biangán', 172, 174–177,
179, 183, 186, 187, 198, 206–
208

c.v. 'Buyés', 168–180, 182,
183, 186, 187, 198, 202,
203, 205, 209

c.v. 'Culebra', 170, 172–176,
179, 183, 186–190, 192,
193, 195, 198, 205, 218–221

c.v. 'Dientes', 173–177, 179,
180, 183, 186, 187, 198, 204

c.v. 'Munchira', 172, 174, 175,
179, 183, 184, 186, 189,
193–195, 198, 213, 216, 217

c.v. 'Ocre', 172–175, 179, 183,
186, 187, 198, 206

c.v. 'Quinde', 172, 174–181,
183, 188, 189, 193, 198,
213, 215

c.v. 'Salaman', 174, 175, 179,
183, 184, 186, 188, 193,
198, 212, 213

cornigera, 196

dolichocarpa (Lagerh.) Saff.,
223

Pittieri Saff., 201

sanguinea R. & P., 168, 170,
196, 198, 204, 220

c.v. 'Guamuco', 179, 183,
186, 187, 197, 199, 200

c.v. *Sangre*, 179, 183, 186,
187, 197, 201

sect. *Brugmansia*, 166

Stramonium, 181, 218

suaveolens H. & B. ex Willd.,
208, 218, 220, 223

vulcanicola A.S. Barkley, 170

DAVIDIA

involucrata Baill., 257

DAVILLA
 lacunosa, 341
 DEHAASIA
 triandra, 251
 DESMOS
 Hancei, 337
 DILLENACEAE, 341
 DIPTERA, 99
 DISTICTELLA
 racemosa (*Bur. & K. Schum.*
 ex Mart.) *Urban*, 347, 350,
 351
 DUBOISIA, 196
 DUROIA, 151
 hirsuta (*P. & E.*) *K. Schum.*,
 152-154
 kotchubacoides Steyerl.,
 154, 155
 petiolaris (Spr.) Hook.f., 154,
 157
 saccifera (Mart.) Hook.f.,
 155, 156
 Sprucei Rusby, 156
 DYALANTHERA
 parviflora, 233
 ELEUTHERINE
 bulbosa, 339
 plicata, 339
epená, 237
 EPIDENDRUM
 tampense Lindl., 262
 EPIGYNUM
 Maingayi, 337
 ethnogynecological plants, 333-
 343
 EUPHORBIACEAE, 142, 336, 340,
 341

FARADAYA
 sp., 337
 fish poisons, 138, 140, 144, 347
 FLACOURTIACEAE, 142
floripondio, 185, 204
floripondio blanco, 202
floripundo, 202
 FRANSERIA
 ambrosioides, 339
 GARRYA, 134
 laurifolia (Hartw.) Benth., 134
 var. macrophylla (Hartw.)
 Wangerin, 134
 GARRYACEAE, 134
 GEINITZIA, 83
 Reichenbachii (Geinitz) Holl.
 & *Jeff.*, 82
 GENTIANACEAE, 146
 GESNERIACEAE, 151, 337
gingivé-k'o, 243
 GLOCHIDION
 cauliflorum, 340
 GLYPTOSTROBUS, 94
 GRAMINEAE, 336, 339, 341
guambia, 200
guamuco, 185, 200, 201, 204
guamuco blanco, 185, 202
guamuco borrachera, 200, 201
guamuco floripundo, 185, 202
 GUSTAVIA
 Poeppigiana Berg. ex Mart.,
 233
 HABENARIA
 nivea (Nutt.) Spreng., 260

HAEMADICTYON, 127

hallucinogens, 121-132, 164,
168, 188-192, 229-240

HAPLOPAPPUS

spinulosus, 339

HELIOTROPIUM

argenteum, 340

he-rog, 233

HINTONIA

latiflora, 338

ho-ko-so-gö-nö, 146

huilca, 237

HYMENAEA, 92-94, 96, 99,
100

Courbaril *L.*, 92-94, 96, 99,
100

HYOSCYAMUS, 196

HYPODAPHNIS

Zenkeri, 251

ICACINACEAE, 337

INAPERTUROPOLLENITES

dubius (*Potonie & Venitz*)

Thompson & Pflug, 79

inzo²tsi, 246

IOSTEPHANE

heterophylla, 339

IRESINE

celosia *L.*, 184

herbstii *Hook f.*, 184

IRIDACEAE, 339

i-te-si-fan-di, 136

JATROPHA

angusti, 341

JUNIPERUS, 73

hynoides *Heer*, 80

KADSURA

scandens, 336

kinde-borrachera, 220

KNEMA

glomerata, 337

kuku, 211

kurru, 234

kutrucu, 234, 236

LABIATAE, 336, 340

LARIX, 73

LAURACEAE, 241, 244, 250, 251

LAURUS

nobilis, 251

lee-the, 151

LEGUMINOSAE, 92, 336, 340, 341

lengua de tigre, 185, 190

le-sa, 233

LILIACEAE, 336

LINDERA

Benzoin, 251

LIQUIDAMBAR, 73, 86

LISIANTHUS

nigrescens *Cham. & Schlecht.*,

146, 148, 149, 151

pendulus *Mart.*, 151

LOGANIACEAE, 339

LORANTHACEAE, 340, 341

LORANTHUS

sp., 340, 341

lulumoco, 267

LUNANIA

parviflora *Spruce ex Benth.*, 142

maicillo, 298

maize, 1, 2, 6, 33, 34, 36, 40,
42-44, 47-49, 54, 57, 58, 62,
182, 297-301, 303-307, 309,
310, 313
archeological, 313-329
prehistoric, 1-24, 33-49, 52-
63, 310

maizillo, 297

maizmillo, 297

maíz silvestre, 298

maleficio, 190

MALLOTUS

Poilanei, 341

MALPIGHIACEAE, 122, 124, 127,
338

MARTINELLA

obovata (HBK.) Bur. et K.

Schum. ex Mart., 347, 351,
352

MASCAGNIA

septentrionalis, 338

mata cachorro, 140

mata negro, 140

matamata, 233

MAURITIELLA

aculeata (HBK.) Burret, 236

medicinal plants, 134, 138, 140,
142, 146, 148, 151, 168, 184,
186, 188, 189, 197, 211, 333-
351

mee-tsee-boo-koo'na, 347

MELICOPE

monophylla, 337

me-re-ta-kee, 144

METAPLEFENTICIRAS

pacificum Smith, 90

METASEQUOIA, 94

METHYSTICODENDRON

Amesianum R.E. Schult., 195,
218, 222

MIMOSA

hostilis, 230, 237

molongó, 347

mongojo, 208

mtzkway borrachera, 222

munchira, 185, 214, 216

munchira borrachera, 216

munchiradas, 216

mutscuai, 185, 218

mutscuai borrachera, 220

MYRISTICACEAE, 337

MYRSINACEAE, 346

NAUTILICALYX

sp., 151

NECTANDRA

coriacea, 251

globosa, 251

Rodiei, Rob. Schomb., 243

ngunsiana, 185, 214

ngunsiana borrachera, 213

NEOLITSEA

Levinei, 251

NEONAUCLIA

formicaria, 337

NEPETA

Cataria, 340

nyakwana, 230, 237

OCIMUM

sanctum, 340

OCOTEA, 243, 251
palmana, 251
Rodiei (*Rob. Schumb.*) Mez,
243, 244
venenosa *Kosterm. & Pinkley*,
241, 244-246, 250, 251

OLACACEAE, 341

ö-me'-na, 346

oo-koó-he, 234

oo-koó-na, 232, 233

o-pri-to, 164

orchid hybrids, generic names
of, 273-289; parentage of,
289-296

o-zia, 148

PALICOUREA, 164

paricá, 237

PAULLINIA, 124

payé, 234

PENNISETUM

alopescuroides, 341

PHASEOLUS

adenanthus, 340

PHENAX

integrifolius *Wedd.*, 187

PHYLLANTHUS

lathyroides *HBK.*, 142

PHYTOCRENE

Blancoi, 337

PICEA, 73, 83

PINACEAE, 73, 75, 79, 80, 83

pinolillos, 148

PINUS, 73, 82, 83

sp., 80

PIPERACEAE, 338

PITYOXYLON, 80, 83

PODOCARPACEAE, 79, 82

poisonous plants, 142, 144, 151,
152, 154, 156, 158, 184, 346

POLLIA

thyrsifolia, 338

POLYOSMA

sp., 337

POLYPREMUM

procumbens, 339

POLYRADICION

Lindenii (*Lindl.*) Garay, 258

POTOMORPHE

peltata, 338

PREMNA

sp., 341

PREPINUS, 82

PROTIUM, 98

Icicariba, 98

PSYCHOTRIA, 156, 164

carthaginensis *Jacq.*, 158, 159

involuta *Sw.*, 158, 161

nudiceps *Standl.*, 158, 159

psychotriaefolia (*Seem.*)

Standl., 158, 163, 164, 230,
237

psychotropic plants, 168, 185,
188-197

PTEROCARPUS

indicus, 340

PTYCHOPETALUM

olacoides, 341

quinde, 185, 214

quinde borrachera, 213, 214

RAMONDIA

pyraica *Rich.*, 151

RAVENSARA

crassifolia, 251

resfrío, 189

ROUREA

erecta (Blanco) Merr., 140

glabra HBK., 140, 141

ligulata Bak., 142

RUBIACEAE, 151, 336-338

RUTACEAE, 337

SABICEA

Vogelii, 338

salamán, 185, 212

salamán borrachera, 212, 213

salamanga, 185

salamanga borrachera, 212

salvanje, 185

salvanje borrachera, 212

SALVIA

divinorum, 340

SAPINDACEAE, 124

SAURAUIA, 265

chaparensis Soejarto, 270

Mexiae Killip ex Soejarto, 268

multinervis Soejarto, 266

Schultesiana Soejarto, 267

SAXIFRAGACEAE, 337

SCHISANDRACEAE, 336

SCHIZOSTACHYUM

Lumampao, 336

SCHOENOBIBLUS

peruvianus Standl., 142-144

SEQUOIA, 73, 80, 82-84

ambigua Heer, 87

heterophyllus, 80

Reichenbachii (Genitz) Heer,
80, 82

SEQUIADENDRON, 73

sha-ka-ker-ná-se, 152

shka-nin-du, 142

shka-tee-tso, 151

SOLANACEAE, 220

solimán, 152, 154

SPIGELIA

pedunculata HBK., 200

squash, 297

STELIS

pendulispica Ames, 264

STYRACACEAE, 144

STYRAX

Tessmannii Perk., 144, 145

TAXACEAE, 73

TAXODIACEAE, 73, 75, 79, 80, 82,
83, 94

TAXODIUM, 73

teosinte, 1, 4, 9, 12, 16, 34, 37,

40, 45-49, 61, 62, 297-301,

303-307, 309, 310, 319

THEOBROMA, 236

THYMELEACEAE, 142

tinye, 190

TORREYA, 73

TOURNEFORTIA

brevilobata, 337

volubilis, 338

trago, 193

TRIPSACUM, 12, 16, 34, 37,

47, 48, 62

dactyloides, 48

zopilotense, 48

tsushie borrachera, 206

ucuna, 234

uña de tigre, 148

UNONOPSIS

veneficiorum (Mart.) R. E. Fr.,
134-136

UROSPATHA, 345

caudata Schott, 346

sagittaeifolia Schott, 346

somnolenta R. E. Schult., 346

VERBENACEAE, 337, 341

VIGUIERA

montana, 339

vinho de yurema, 237

VIROLA, 229, 230, 232-234, 236, 237

calophylla Warb., 229, 230

calophylloidea Markg., 229,
230, 236

elongata (Benth.) Warb., 229,
236

peruviana (A. DC.) Warb., 236

theiodora (Spr. ex Benth.)

Warb., 229, 230, 232, 235,
237

VOCHYSIA

lomatophylla, 339

VOCHYSIACEAE, 339

WIDDRINGTONIA

Reichii (EH.) Heer, 80

wy-gaw-nó-mé-kö, 347

wy-soo-dö, 158

yagé, 191

yajé, 164, 237

yakee, 237

yerk, 151

yoom-dá-ka, 347

yopo, 237

yurema, 237

ERRATA

Page 336, line 6
for twelve read fourteen

Page 336, line 8
delete "the *Gramineae* by four,"

Page 339, line 6
for *Gramineae* read *Cyperaceae*

Page 340, last line
replace the , by a .

Page 341, line 1
delete "from the *Gramineae*"

Page 341, line 2
insert , *Gramineae* after Frake 512

Page 341, line 4
insert , *Gramineae* after Kajewski 276

Issued January 26, 1972